

WHAT IS CLAIMED:

1. A machine for the manufacture of a fiber material web, comprising:
 - a shoe pressing unit;
 - a cylinder comprising a Yankee drying cylinder, said shoe pressing unit and said cylinder being arranged to form at least one press nip;
 - a water absorbent carrier band;
 - a water-impermeable pressing band, wherein said water absorbent carrier band and said water-impermeable pressing band are guided through said at least one press nip, and the fiber material web is adapted to pass through said at least one press nip with said water absorbent carrier band and said water-impermeable pressing band; and
 - said at least one press nip has a length in a web travel direction greater than approximately 80 mm,
 - wherein said shoe press unit, said cylinder, said water absorbent carrier band and said water-impermeable pressing band are structured and arranged so that a pressure profile which results over the press nip length has a maximum pressing pressure which is less than or equal to approximately 2 MPa, and
 - wherein said shoe press unit, said cylinder, said water absorbent carrier band and said water-impermeable pressing band are structured and arranged for the formation of one of a tissue paper and a hygienic paper web.
2. The machine in accordance with claim 1, wherein said press nip length is less than 200 mm.
3. The machine in accordance with claim 2, wherein said press nip length is at most 150 mm.
4. The machine in accordance with claim 1, wherein the maximum line force produced in said press nip is between approximately 90 and approximately 110 kN/m.

5. The machine in accordance with claim 1, wherein said shoe pressing unit comprises:

a plurality of press elements arranged adjacent one another cross-wise to the web travel direction;

a press shoe arranged to be pressed against said cylinder, wherein said plurality of press elements are adapted to press said press shoe against said cylinder.

6. The machine in accordance with claim 5, wherein said plurality of press elements are actuatable independently of one another.

7. The machine in accordance with claim 1, wherein the pressure profile which results over said press nip length is asymmetrical.

8. The machine in accordance with claim 1, wherein the maximum pressing pressure is exerted in a rear quarter of said press nip length with regard to the web travel direction.

9. The machine in accordance with claim 1, wherein, for a practically new carrier band, an average pressure rise gradient in a section of the pressure profile which extends from a beginning of said press nip up to the maximum pressing pressure is greater than or equal to approximately 40 kPa/mm.

10. The machine in accordance with claim 9, wherein the average pressure rise gradient in said section is greater than or equal to approximately 60 kPa/mm.

11. The machine in accordance with claim 9, wherein the average pressure rise gradient in said section is greater than or equal to approximately 120 kPa/mm.

12. The machine in accordance with claim 1, wherein, in a practically new carrier band, an average pressure drop gradient in an end region of the pressure profile is greater than or equal to approximately 300 kPa/mm.

13. The machine in accordance with claim 12, wherein the average pressure drop gradient in said end region is greater than or equal to approximately 500

kPa/mm.

14. The machine in accordance with claim 12, wherein the average pressure drop gradient in said end region is greater than or equal to approximately 800 kPa/mm.

15. The machine in accordance with claim 12, wherein the average pressure drop gradient in said end region is greater than or equal to approximately 960 kPa/mm.

16. The machine in accordance with claim 1, wherein, in said at least one press nip, said water absorbent carrier band is positioned between said water-impermeable pressing band and the fiber material web.

17. The machine in accordance with claim 16, wherein the fiber material web is adapted to contact said cylinder.

18. The machine in accordance with claim 1, wherein said water absorbent carrier band comprises a felt.

19. The machine in accordance with claim 1, wherein said water absorbent carrier band is constituted differently in a thickness direction.

20. The machine in accordance with claim 1, wherein a side of said water absorbent carrier band adapted to face the fiber material web has a finer structure than a side of said water absorbent carrier band adapted to face away from the fiber material web.

21. The machine in accordance with claim 1, wherein said water-impermeable pressing band has a surface which is at least one of smooth, grooved and blind bored.

22. The machine in accordance with claim 1, further comprising at least one additional press nip formed at said cylinder.

23. The machine in accordance with claim 22, further comprising an

additional shoe press unit arranged with said cylinder to form said at least one additional press nip.

24. The machine in accordance with claim 1, further comprising an additional press nip arranged ahead of said cylinder relative to the web travel direction.

25. The machine in accordance with claim 1, further comprising at least one suction device,

wherein ahead of said cylinder, relative to the web travel direction, said water absorbent carrier band and the fiber material web are guided by said at least one suction device.

26. The machine in accordance with claim 25, wherein said at least one suction device comprises at least one of suction roller and/or a suction shoe.

27. The machine in accordance with claim 1, wherein said shoe press unit comprises a shoe press roll.

28. The machine in accordance with claim 27, wherein said water impermeable pressing band comprises a pressing jacket of said shoe press roll.

29. The machine in accordance with claim 1, wherein said shoe press unit comprises at least one replaceable pressing shoe.

30. The machine in accordance with claim 1, wherein said water absorbent carrier band comprises one of a structured felt having one of protuberances and a coarsely structured surface.

31. The machine in accordance with claim 30, wherein said felt having protuberances comprises one of an imprinting fabric and an imprinting felt.

32. The machine in accordance with claim 30, wherein said structured felt having a coarsely structured surface comprises one of a patterning fabric and a patterning felt.

P24575.S01

33. The machine in accordance with claim 1, wherein the fiber material web comprises curled fibers.